

No. 848,273.

PATENTED MAR. 26, 1907.

H. J. TRAVIS.  
PULVERIZER.

APPLICATION FILED MAY 19, 1905.

Fig. 1.

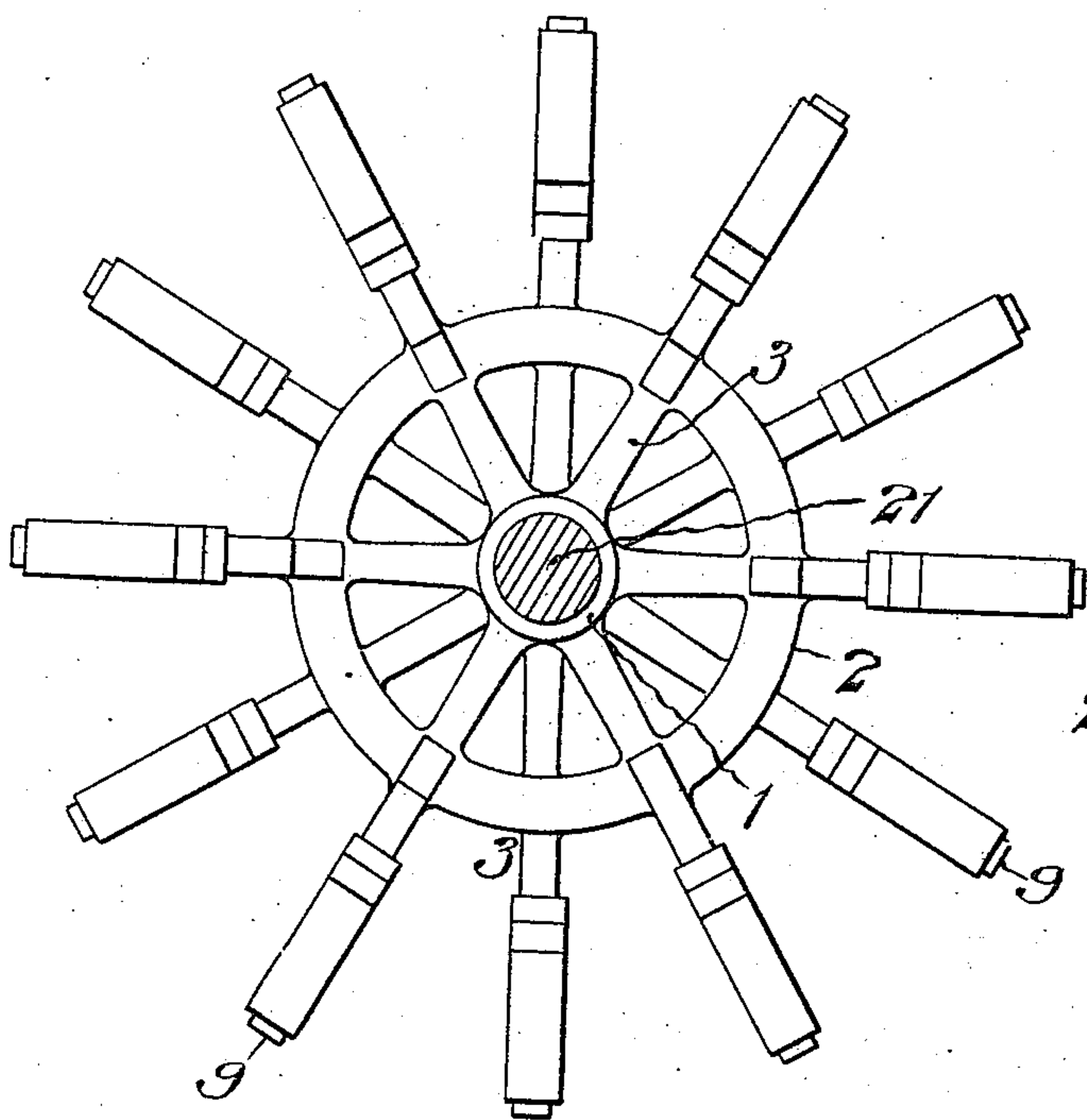


Fig. 2.

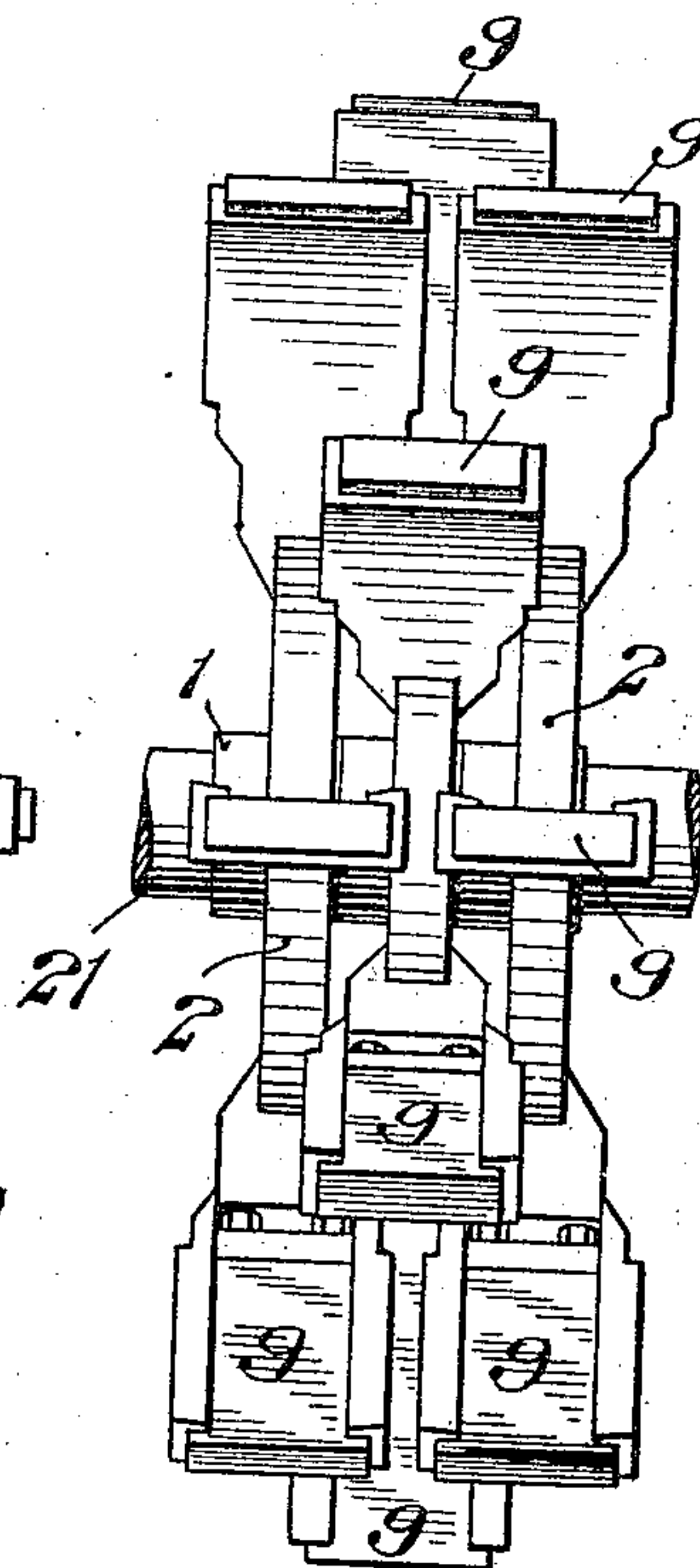


Fig. 3.

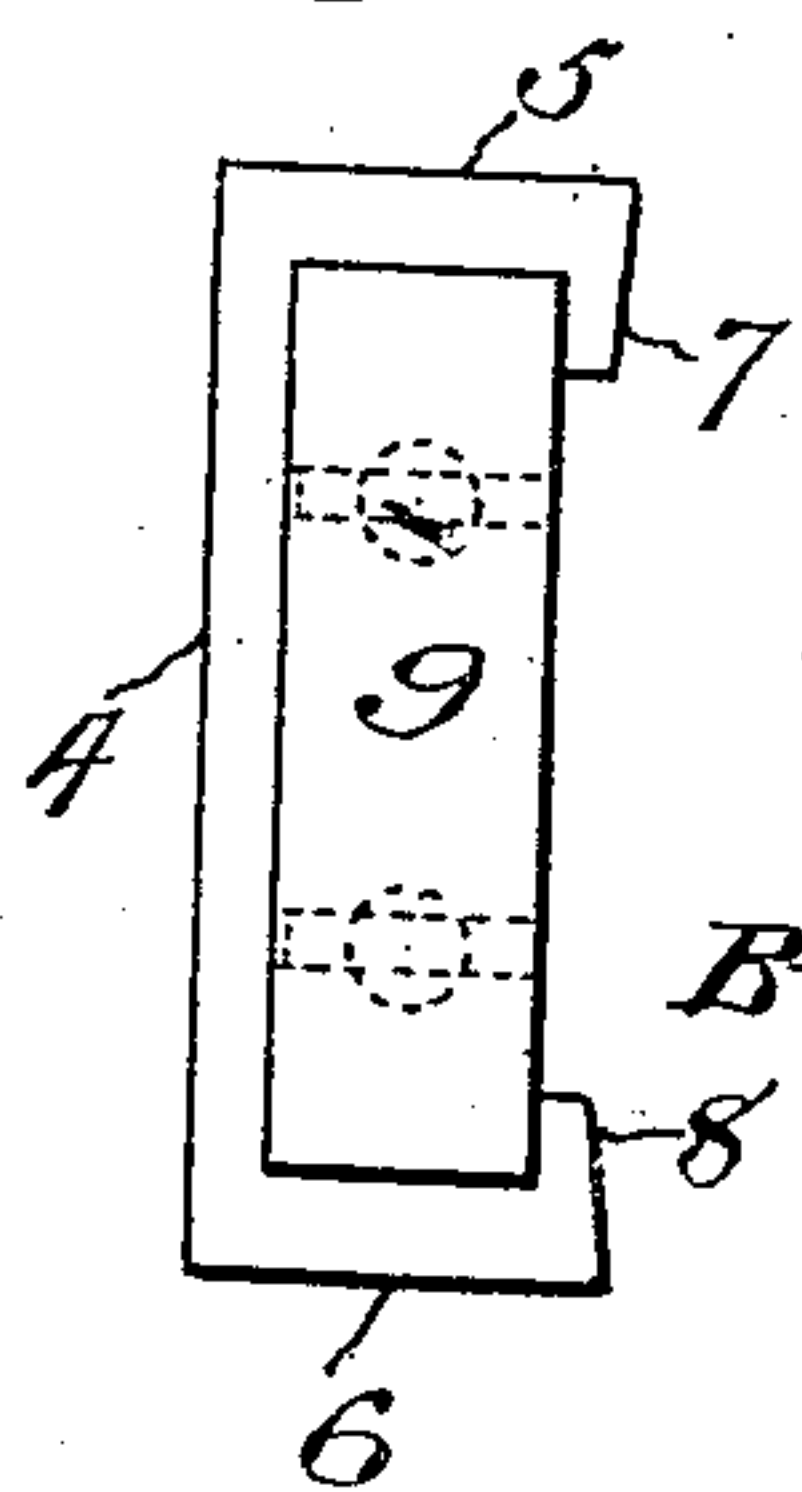


Fig. 4.

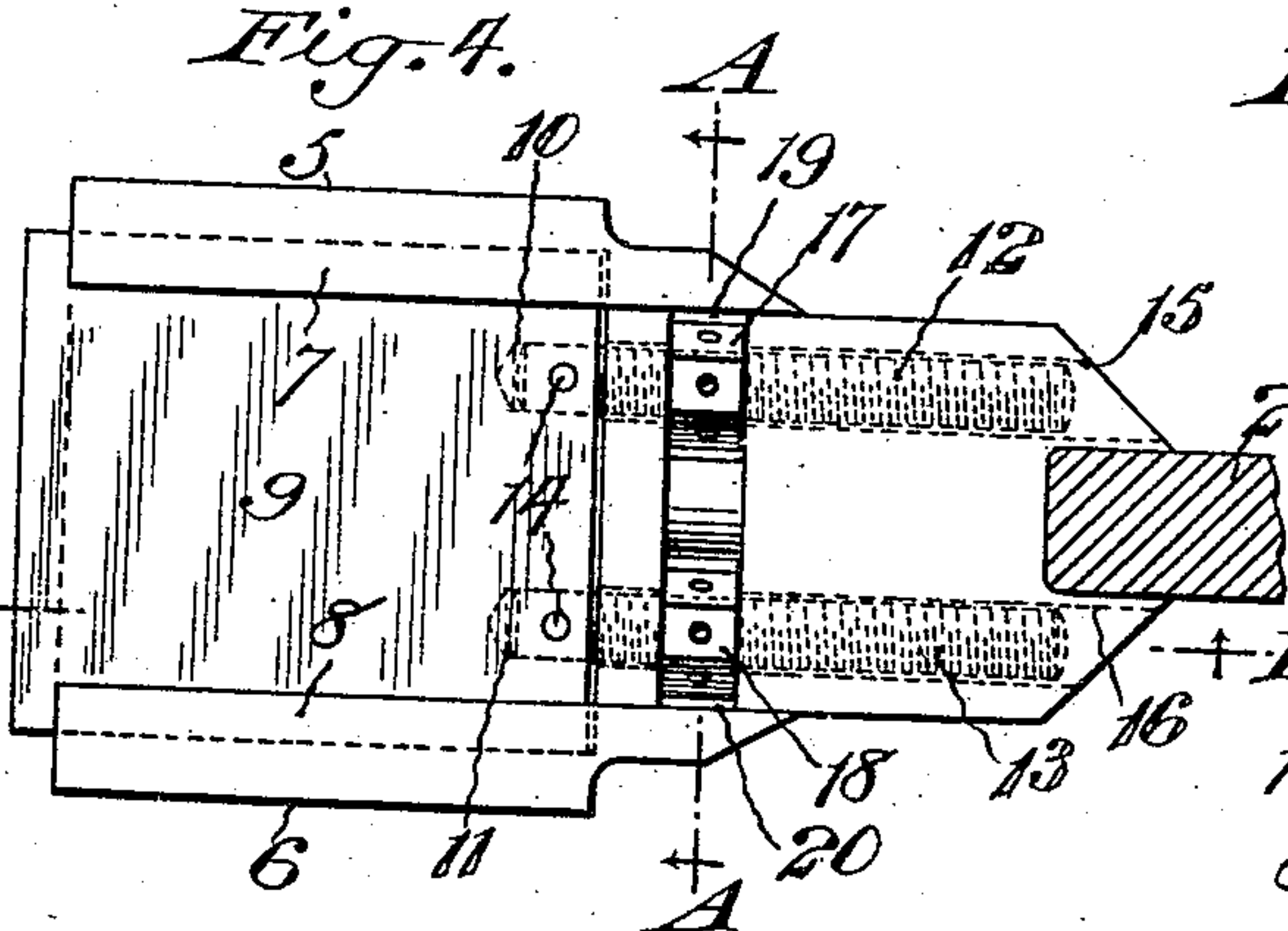


Fig. 5.

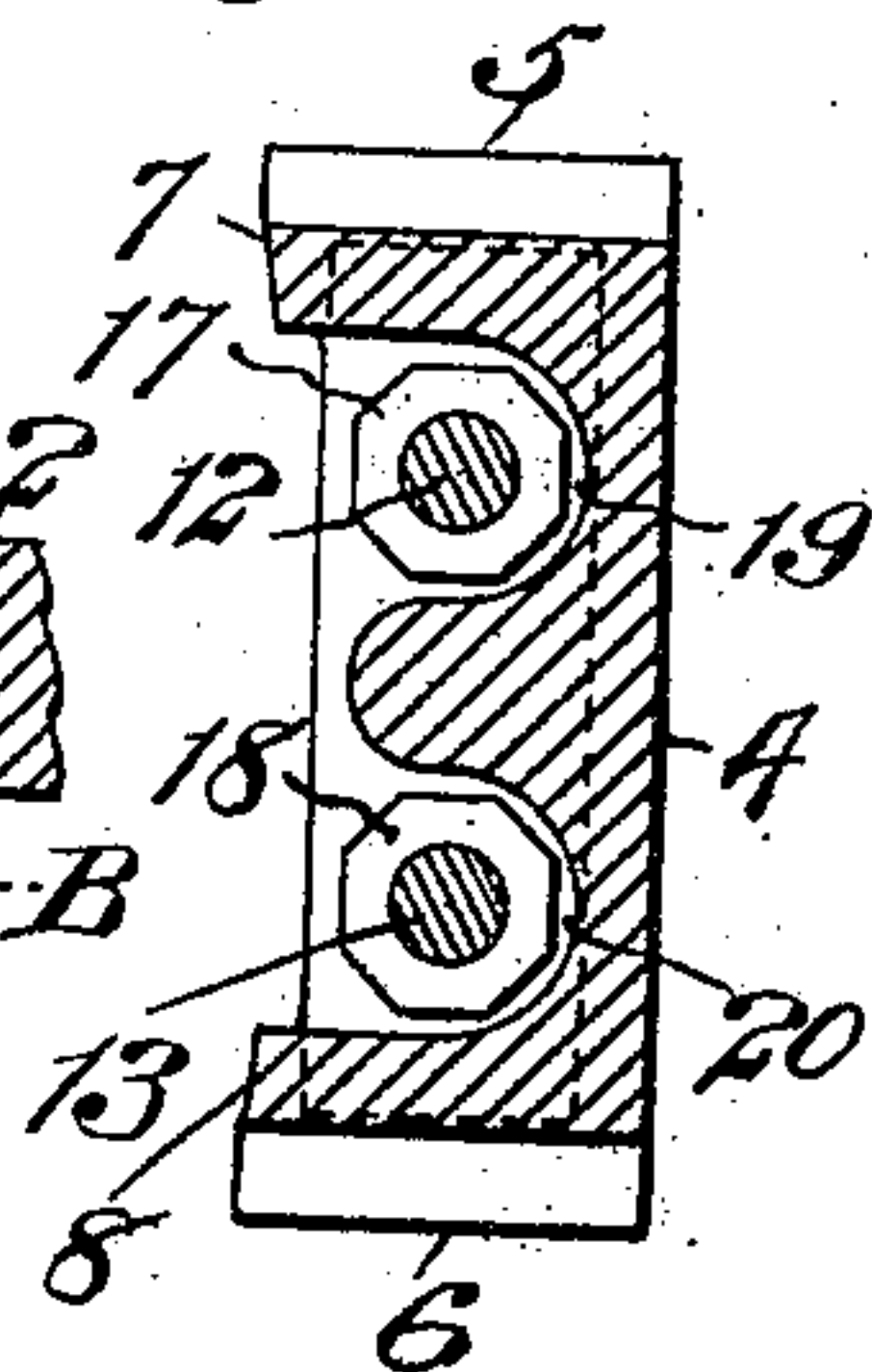
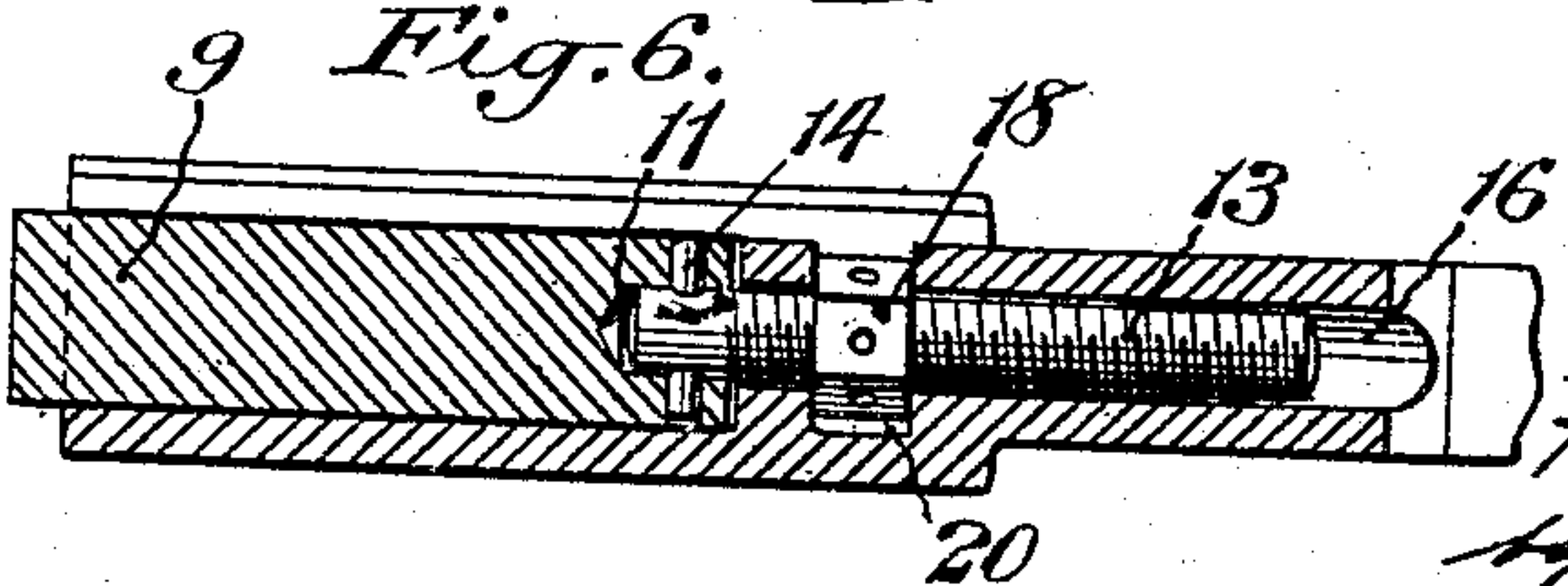


Fig. 6.



Witnesses:  
J. George Barry,  
Henry Thieme.

Inventor:  
Herbert J. Travis  
by attorneys  
Brown & Luard



# UNITED STATES PATENT OFFICE.

HERBERT J. TRAVIS, OF NEW YORK, N. Y.

## PULVERIZER.

No. 848,273.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed May 19, 1905. Serial No. 261,127.

*To all whom it may concern:*

Be it known that I, HERBERT J. TRAVIS, a citizen of the United States, and a resident of the borough of Brooklyn, in the city and State of New York, have invented a new and useful Pulverizer, of which the following is a specification.

My invention relates to pulverizers, and more particularly to the structure of the pulverizing mechanism intended to rotate within a cylinder to pulverize the material fed into the end of the cylinder.

The form which I have chosen to illustrate my invention is that which is suited to pulverizing coal for the purpose of reducing it to a flour-like condition for burning it in suspension in the air.

In the accompanying drawings, Figure 1 is a view in end elevation of two of the beater-sections, each provided with six arms having beaters on their ends and mounted on a common shaft. Fig. 2 is a view in side elevation showing three of said beater-sections. Fig. 3 is an enlarged end view in detail of one of the beaters. Fig. 4 is a face view of one of the beaters. Fig. 5 is a transverse section in the plane of the line A A of Fig. 4, and Fig. 6 is a section from front to rear in the plane of the line B B of Fig. 4.

The beater-sections consist of a hub portion 1, connected with a ring 2 by means of arms 3, the said arms 3 being extended beyond the ring to form seats for the beaters proper.

The extended portions of the arms 3 are broadened out into plates 4, having their opposite edges 5 and 6 turned at right angles to the body portion and provided with inwardly-turned lips 7 and 8 to form retaining-recesses for the opposite edges of a beater 9, preferably oblong in cross-section, as clearly shown in Fig. 3.

The beater 9, which is intended to take the greater share of the wear during operation, may be made of chilled iron and for purposes of adjustment is shown herein as provided with sockets 10 and 11 in its lower end, in which the upper ends of adjusting-screws 12 and 13 are secured by means of cross-pins 14,

the said screws extending downwardly through bores 15 and 16 in the extended portion of the arm 3.

Adjusting-nuts 17 18 are engaged with the screws 12 and 13 in slots 19 20, formed in the shank of the extended portion of the arm 3, and abut against the opposite walls of the slots to hold the beaters 9 securely in position in their seats in the arms. This construction admits of adjusting the beaters 9 so that they will just clear the inner end of the cylinder in which they are supposed to rotate, and when they become worn away at their outer ends in use they may be gradually adjusted outwardly toward the inner wall of the cylinder in which they are supposed to rotate until they are worn out, when they may be readily replaced at very slight expense without requiring a new arm or beater-section. This structure also admits of casting the beater-sections exclusive of the beaters 9 and their adjusting mechanisms integral and securing them on the beater-shaft 21 in such relation that the beaters proper on a beater-section may overlap to a greater or lesser degree, as shown in Fig. 2, the beaters on adjacent sections thus keeping the material under treatment in constant agitation and very effectually and quickly reducing it to a powder.

What I claim is—

The combination with a beater-arm provided with a seat in its outer end for retaining a beater, of a beater having a sliding movement in said seat, a screw connected with the beater and extending into a socket in the arm and an adjusting-nut engaged with the screw and having a bearing in the arm, the said adjusting-nut serving to lock the screw to the arm, and also serving to adjust the beater with respect to the arm.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 18th day of May, 1905.

HERBERT J. TRAVIS.

Witnesses:

FREDK. HAYNES,  
HENRY THIEME.